Structural and semantic features of adjectives across languages and registers

Abstract

This study focuses on the seemingly simple grammatical category of adjectives. However, the framework adopted of analysing adjectives from both a cross-linguistic and a cross-register perspective highlights features of grammatical complexity within phrases as well as contrastive complexity within and across languages and registers. On the basis of English-Norwegian comparable data from the fictional sub-registers of narrative and dialogue, the analysis uncovers both similarities and differences in the structural and semantic features of adjectives. Most notable is perhaps the impact of register at all levels of analysis, including adjectival function (attributive vs. predicative), the degree of phrase complexity and semantic class according to function. The contrastive analysis proper, i.e. between the languages, reveals that English and Norwegian have more in common within each sub-register than across them. For example, the lexico-grammatical behaviour of adjectives in English narrative has more in common with Norwegian narrative than it has with English dialogue. To the extent that there are clear general differences between English and Norwegian, these are mainly found in the proportions and preferences of a few specific features.

Keywords: attributive vs. predicative adjectives, semantic class, phrase complexity, dialogue vs. narrative, English/Norwegian

1. Introduction

This paper investigates the use of adjectives in comparable English and Norwegian fictional texts. In a previous contrastive study of 'be' verbs in Czech, English and Norwegian, it was found that the use of adjectives in predicative function, i.e. in the NP BÝT/BE/VÆRE + ADJ pattern, is a more defining feature of English fiction than of the other two languages in terms of frequency (Čermáková et al. Forthcoming). Moreover, even if the analysis suggested that the three languages resort to similar strategies to describe fictional subjects by means of (predicative) adjectives, some differences were noted in the semantic quality of the adjectives used in the languages compared.

Inspired by the findings from the previous study, the current study, focusing on English and Norwegian only, seeks answers to the following overarching research questions:

1. Does Norwegian fiction make more frequent use of attributive adjectives to convey the same message as English does with predicative adjectives?

2. Does language have an impact on the semantic class of attributive and predicative adjectives in fiction overall?

These questions involve a quantitative and qualitative investigation of attributive, e.g. example (1), vs. predicative, e.g. (2), uses of adjectives in the two languages, in addition aiming to shed light on the extent to which they enter into more or less complex NPs (attributive) or ADJPs (predicative) in the two languages.

(1)   Vi kan velge mellom fjorden og et *oppvarmet* svømmebasseng. (CL1n)[1]
        We can choose between the fjord and a *heated* swimming pool. (CL1Tn)

(2)   She's *miserable*.   (RDA1d)

These questions will not only be addressed from a cross-linguistic perspective, as the current study will take the hybrid nature of fiction into account by separately investigating the use of adjectives in passages representing fictional dialogue vs. narrative. In other words, the two research questions outlined above come with an additional question, namely whether the tendency is the same across the two sub-registers of fiction. This added complexity of operating with two registers (dialogue and narrative) instead of one (fiction) has proved to be an important one when investigating the language of fiction, as previous studies have pointed to linguistic differences between the two sub-registers both monolingually (e.g. for English, Egbert & Mahlberg 2020; Ebeling & Hasselgård 2020), and also cross-linguistically (e.g. for English-Norwegian, Ebeling & Ebeling 2020).

The main aims of this study are thus to map the similarities and differences in adjectival choice and behaviour in English and Norwegian fiction and to determine whether language or register is more decisive for this behaviour. This further implies that the study's angle on the theme of complexity is twofold; it features highly complex data and is concerned with potentially complex grammatical structures. The degree to which adjectives in English and Norwegian fiction enter into such complex structures will be investigated as part of their lexico-grammatical behaviour.

This article has the following structure: Section 2 outlines the material and method used, while Section 3 gives some relevant background to the study. Section 4 is devoted to the cross-linguistic, cross-register analysis of the lexico-grammar of adjectives, first in terms of their function/ position (Section 4.1) and, second, in terms of their semantic class (Section 4.2). Following a discussion of the main findings of the study in Section 5, the research questions are revisited and answered in Section 6, which closes with some general concluding remarks and suggestions for further research.

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[1] The codes in brackets refer to the corpus text from which the example was taken (CL1). A capital T following the text identifier means 'translation', whereas lower case 'n' and 'd' refer to the narrative and dialogic parts of the texts, respectively. Thus, example (1) is taken from the narrative part of text number 1 by Cecilie Løveid, originally written in Norwegian. The second part of example (1) is the English translation (T) of the same passage in that text.

2.   Material and Method

2.1   The corpus and the comparable contrastive method

This study draws on material from the fiction part of the English-Norwegian Parallel Corpus (ENPC), a bidirectional parallel (translation) corpus containing texts originally written in English and Norwegian, with their translations into the other language (Johansson 2007). For the purpose of the current investigation, where adjectival choice according to language is one of the features under investigation, the ENPC will be used as a comparable corpus, i.e. only the original texts will be consulted. Thus, the contrastive method depends on *tertia comparationis* other than translation correspondence, notably text type (fiction), date of publication (late 20th century) and object of study (the grammatical category of adjectives). With reference to the first of these – text type – a further decision was made to only include texts that are defined as general fiction, thus ensuring a more homogeneous corpus of 20 English and 19 Norwegian original texts.[2] The texts consist of extracts of 12,000-15,000 words each and have been tagged for part of speech and split into sub-corpora representing dialogue and narrative in each language. As can be seen in Table 1, the narrative parts of the corpus are considerably larger than the dialogue parts. This does not have an impact on the (data extraction and) results in this particular study, as a fixed sample of equal size from each sub-corpus will be used (see Section 2.2).

Table 1. Size of the dialogue and narrative parts of the ENPC, general fiction

	Words in 20 English original text extracts	% (English originals)	Words in 19 Norwegian original text extracts	% (Norwegian originals)
Dialogue	51,520	18.9%	31,870	12.3%
Narrative	221,501	81.1%	227,358	87.7%
Total	273,021	100%	259,228	100%

2.2   Data extraction method and the data set

The data extraction was facilitated by the fact that the texts were POS-tagged, enabling searches for adjectives in the corpus tool AntConc (Anthony 2019). However, the use of tagged corpora in contrastive studies poses quite a few challenges, especially when different and language-specific taggers have been used, as is the case in this version of the ENPC. The Oslo-Bergen tagger (Johannessen et al. 2012) was used to tag the Norwegian texts and CLAWS 7 (UCREL 1996) was used to tag the English texts. One issue that is particularly problematic in the current context is the fact that the primary tag **adj** in the Oslo-Bergen tagger is not exclusively reserved for adjectives in the traditional sense, but is also used for all gradable adverbs, as illustrated in example (3) where the adverb *grundig* 'thoroughly' is tagged as an adjective. Instances like these were excluded in a semi-automatic process.

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[2] The full fiction part of the ENPC consists of original 30 text extracts from each language and also includes crime fiction and children's fiction (Johansson et al. 1999/2001).

(3)   Han_**pron** dyppet_**verb** den_**det** grundig_**adj**.   (EFH1n)
        … dipped it in thoroughly …   (EFH1Tn)

Another, related challenge with the tagging concerns the underlying grammar and the delicacy of the tag sets. For example, the Norwegian counterparts of some words that have received an adjective tag in English, e.g. *only* in example (4), have been tagged as adverbs or determiners in Norwegian and vice versa, as shown in examples (5) and (6).[3] These have also been left out of the study to ensure comparability.

(4)   English only_**JJ** corresponding to either 'bare_**adv**' or 'eneste_**det**'

(5)   Norwegian mer_**adj** corresponding to 'more_**RRR**'

(6)   Norwegian mye_**adj** corresponding to 'much_**DA**'

In another semi-automatic process, these items were searched for in the tagged files and their tags were removed, so that the **JJ** and **adj** tags attached to these words would not be searchable in the actual data extraction procedure. In this procedure, using the Concordance tool in AntConc, I searched for words tagged as adjectives (i.e. *_**JJ** in the English sub-corpora and *_**adj** in the Norwegian ones). At the same time, and to randomize the sample, the concordances were sorted on R8 (i.e. the item in 8th position after the adjective, counting both tags and words) to avoid an alphabetically sorted sample on R1, or an unsorted sample according to text order. Finally, to get a manageable amount of data, every 2nd concordance line in English and Norwegian dialogue was extracted and every 13th (for English) and 19th (for Norwegian) in narrative, yielding around 1,000 concordance lines from each sub-corpus. Figure 1 illustrates a search in the English dialogue parts.

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[3] The CLAWS tags **RRR** and **DA** stand for "comparative general adverb" and "after-determiner or post-determiner capable of pronominal function", respectively. See the full list of CLAWS7 tags at https://ucrel.lancs.ac.uk/claws7tags.html and the Oslo-Bergen Tagger at <http://tekstlab.uio.no/obt-ny/english/tagset.html>.
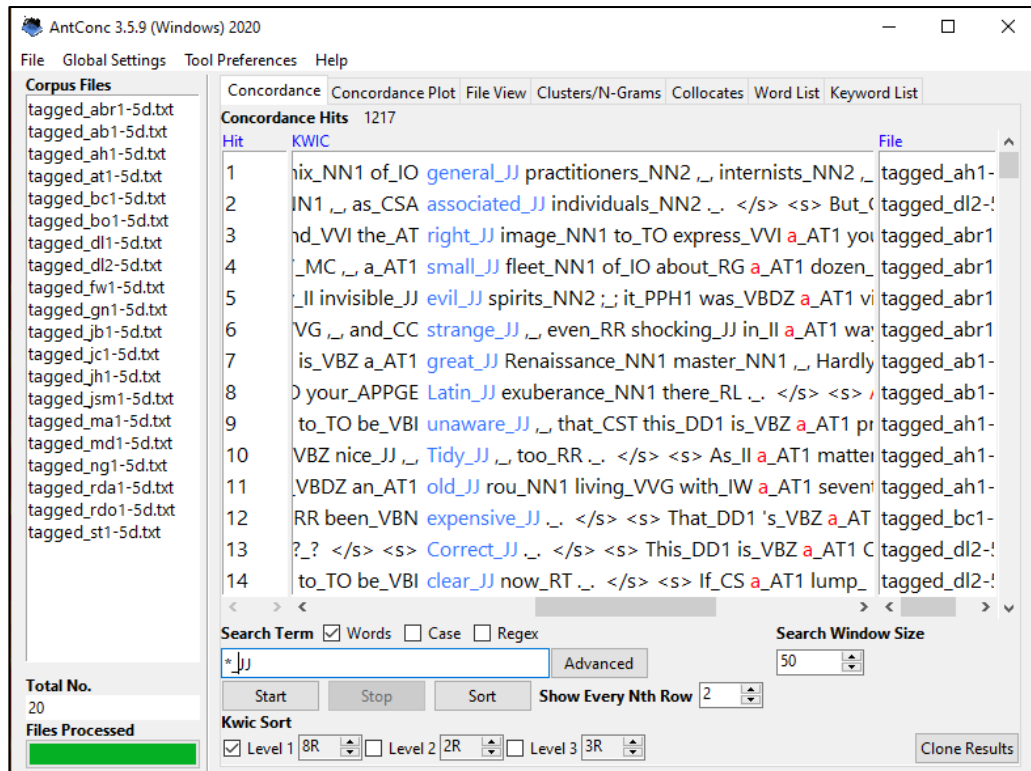
Figure 1. AntConc search for every 2ⁿᵈ concordance line with an adjective sorted on R8

To reach the target of assembling a balanced data set of 2,000 adjectives altogether, I started manual scrutiny of these approx. 4,000 concordance lines to weed out remaining wrongly tagged items (typically adverbs and nominalized adjectives). I had to look through between 528 (English narrative) and 829 (Norwegian dialogue) random concordance lines before reaching 500 per sub-corpus, suggesting that the taggers have a different success rate when it comes to identifying adjectives. It is not surprising that the Norwegian tagger is less accurate on this point, as several words in different word classes have identical forms, notably adjectives and adverbs, e.g. (7) and (8), where *tydelig* is an adverb in (7) but an adjective in (8) (see also example (3) above). The distinction is made apparent in the English translations.

(7) … som hun så *tydelig* betraktet som en bør … (KF2n)
      … which she so *patently* regarded as a curse … (KF2Tn)

(8) I søkket mellom tommel og pekefinger på venstrehanda er det et *tydelig* arr. (JM1n)
      In the hollow of my left hand between thumb and index finger there's a *visible* scar. (JM1Tn)

It also seems to be the case that a larger number of Norwegian words have been wrongly tagged due to special (dialectal) forms not recognized by the tagger, e.g. *koffør* in (9), which has received an adjective tag rather than an adverb tag; *koffør* is a dialectal variant of the adverb *hvorfor* 'why' and the tagger has defaulted to an **adj** tag.

(9) "*Koffør* det?" (HW1d)
      "*Why*?" (HW1Td)

In terms of dispersion of the 500 adjectives per sub-corpus, all the narrative texts are represented in both English and Norwegian, whereas 19 out of 20 texts in the

English dialogue sample and 18 out of 19 are represented in the Norwegian dialogue sample. Thus, a relatively sound distribution has been secured.

2.3 Lexico-grammatical classification of adjectives

According to Dixon (2004: 44) "the label 'adjective class' [in English is] used for a word class that:

– is grammatically distinct from noun class and verb class;

– includes words from some or all of the prototypical adjective semantic types – DIMENSION, AGE, VALUE, COLOUR;

– and functions (a) […] as copula complement and/or (b) modifies a noun in a noun phrase."

The lexico-grammatical classification of the 2,000 adjectives in this study involves a structural classification in terms of function (predicative vs. attributive, i.e. functions (a) and (b) in Dixon's third bullet point) and phrase complexity, as well as a semantic classification of each adjective, including more adjective classes than the core ones listed by Dixon above. The frameworks used for these classifications are presented in the following sub-sections.

2.3.1 *Structural classification*

The main categories in the classification of adjectives are attributive vs. predicative as in examples (1) and (2) above, where, according to e.g. Pérez Blanco (2016: 38), there is no particular emphasis on adjectival content in the attributive use, whereas it becomes the focused element in the predicative use. For example the attributive adjective in (1) – *oppvarmet* 'heated' – denotes "an intrinsic quality of the noun being modified" (ibid.), in this case *svømmebasseng* 'swimming pool'. In contrast, the predicative adjective *miserable* in (2) is the focused rheme, emphasizing the fact that the subject is indeed miserable. The analysis of attributive and predicative adjectives will also be concerned with cross-linguistic and cross-register observations regarding the complexity of the phrases in which the adjectives occur, i.e. to what extent a phrase contains elements other than the minimum syntactic requirement. Compare examples (10), which contains a simple ADJP with the predicative adjective *strange* as the only item in the phrase, and (11), which contains a fairly complex ADJP, where the (predicative) adjective *certain* is premodified by the adverb *reasonably* and postmodified by the PP *about myself*.

    (10) Everything looked *strange*.   (BO1n)

    (11) I felt <u>reasonably</u> *certain* <u>about myself</u>.   (ABR1n)

Other adjectival categories that will not be part of the main study is 'predicative with dummy subject' as in (12), with anticipatory subject *det* 'it', and (13), with empty *it*. Finally, an "other" category includes postpositive use, as in (14), and Object Predicative, as in (15), verbless clauses consisting of an adjective or ADJP only, e.g. (16), and fixed expressions, as in (17). These have all been left out of the main study.

(12)   … <u>det</u> er mye *sunnere* å bo på landet.   (BV2d)
       … <u>it</u> is much *healthier* to live in the country.   (BV2Td)

(13)   But <u>it</u>'s so *co-o-o-ld* in England…   (DL1d)

(14)   There's something *fascinating* in the scheme…   (ABR1d)

(15)   I'm leaving it *open*.   (ABR1d)

(16)   *Unfaithful*.   (FW1n)

(17)   De venter alltid det riktige, ikke *sant*?   (KA1d)
       You're always expecting the right thing aren't you?   (KA1Td)
       "You're always expecting the right [thing], not *true* (i.e. 'aren't you?')"

2.3.2 *Semantic classification*

The second part of the study will be concerned with the distribution of the adjectives according to semantic category. The current framework is, as in the study by Čermáková et al. (Forthcoming), inspired by Biber et al. (1999) and Dixon (2010:73ff; 2004).[4] However, the framework is more fine-grained than the one adopted in the previous study, in that it contains 13 categories rather than seven. The actual adjectives used in the English and Norwegian samples will be classified according to the following semantic categories (with examples in English only, for convenience):

- **Ability/willingness**: e.g. *able, reluctant*

- **Affective** (affective psychological states and personal affective stance): e.g. *anxious, friendly, scared*

- **Degree of certainty**: e.g. *clear, likely, obvious, true*

- **Colour**: e.g. *black, bright, red*

- **Ease/difficulty**: e.g. *easy, hard, tough*

- **Evaluative** (evaluation of animate beings, situations, events, etc.): e.g. *awful, beautiful, surprising*

- **Habitual behaviour**: e.g. *accustomed, constant*

- **Importance/necessity**: e.g. *important, obligatory*

- **Narrowing** (i.e. restrictive / delimiting): e.g. *final, single*

- **Provenance**: e.g. *English, arctic*

- **Physical property**: e.g. *cold, flushed, wrinkled*

- **Time** (incl. age, chronology, frequency): e.g. *early, old, quick*

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[4] Dixon (2010: 73-74) adds nine additional sematic types to the four prototypical ones listed above, including PHYSICAL PROPERTY and DIFFICULTY.

– **Miscellaneous** (incl. topical): e.g. *professional, missing, racist*

The semantic analysis will be concerned with the potential attraction of the different classes to either attributive or predicative use, followed by a breakdown of these according to language and sub-register. The insights gained from this analysis will complement e.g. Biber et al.'s (1999: 511; 518) observations regarding attributive and predicative adjectival classes in fiction overall.

3.   Background

The starting point and main inspiration for this investigation are the cross-linguistic findings from the previous study by Čermáková et al. (Forthcoming) mentioned above, focusing on the prototypical 'be' verbs in English, Norwegian and Czech fictional texts from the International Comparable Corpus (Kirk et al. 2018, Čermáková et al. 2021). In a qualitative case study of 'be' verbs in the so-called linking pattern with an adjectival complement, Čermáková et al. (Forthcoming) found that English BE was proportionally more frequently used in this pattern than its Norwegian and Czech counterparts: VÆRE and BÝT. This is illustrated in Figure 2, where the bars representing the linking pattern with a predicative adjective (NP/Ø+V+ADJP) are circled.
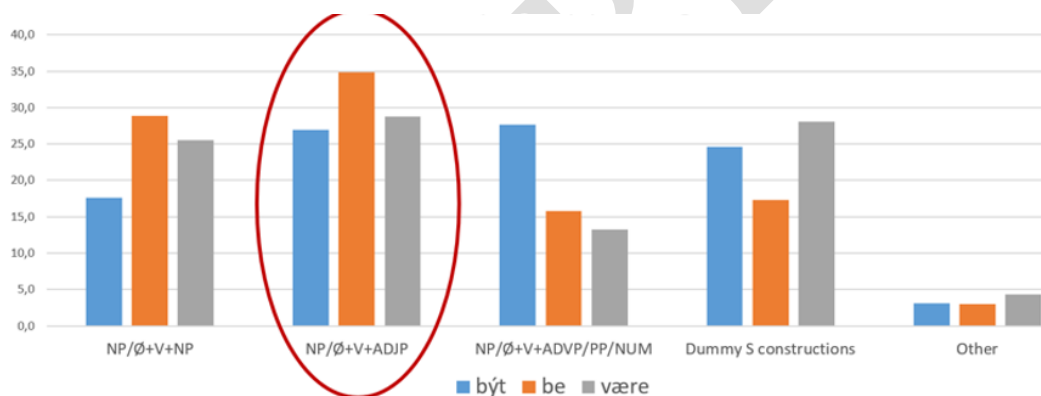

Figure 2. Distribution (%) of 'be' verb patterns in Čermáková et al. (Forthcoming), highlighting the linking pattern with adjectival complement

These proportional differences made me want to look into potential reasons for this; could it be that, compared to English, Norwegian (and Czech) makes more frequent use of attributive adjectives to convey the same message, or that they make more frequent use of other copular verbs than BÝT and VÆRE in the predicative linking pattern.

Moreover, some minor differences regarding preferred semantic classes were revealed, as can be seen in Figure 3.
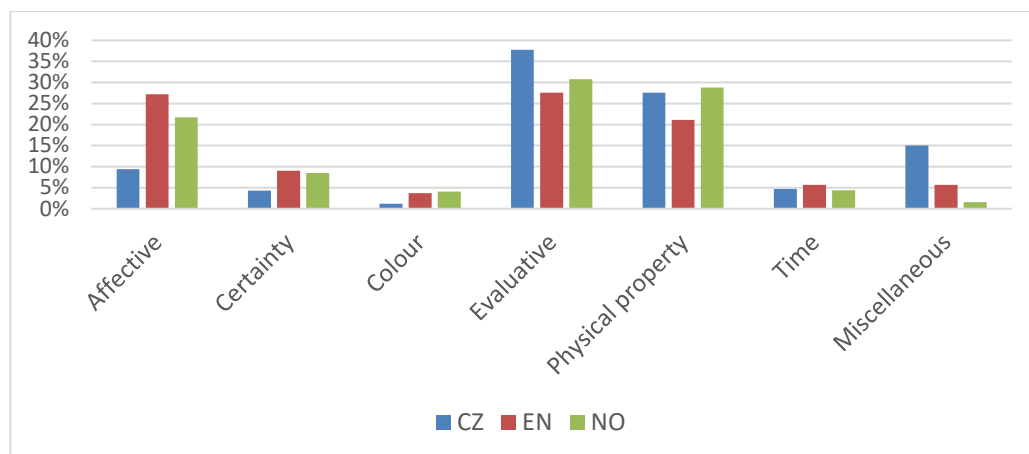
Figure 3. Distribution (%) of semantic classes of predicative adjectives in Czech, English and Norwegian fiction (Čermáková et al. Forthcoming)

Most relevant in the current context are the slight discrepancies found between English and Norwegian, where English fiction prefers Affective adjectives, as in (18), whereas Norwegian prefers Evaluative and Physical property adjectives, as in (19) and (20), respectively.

> (18) Mary Louise herself was *terrified*. (ICC-EN)[5]

> (19) Begge var *fine* … (ICC-NO)[5]
> 'Both were *good-looking*'

> (20) Luften var svært *tørr*. (ICC-NO)
> 'The air was very *dry*'

Despite these slight language-specific preferences in adjectival class, it was concluded that the three languages resort to similar ways of describing fictional subjects by means of predicative adjectives. Thus, fiction seems to be a relatively homogeneous register in this respect (at least in these three European languages). However, drawing on previous research on fiction as a hybrid register consisting of dialogue and narrative (e.g. Egbert & Mahlberg 2020, Ebeling & Ebeling 2020), this study aims to test this apparent homogeneity in terms of adjectival classes used in the two sub-registers of fiction.

The findings and avenues for further research from the previous study outlined above serve as a backdrop to this more detailed study of adjective use in English and Norwegian in an arguably more complex set up by adding predicative uses with verbs other than BE and VÆRE, by adding attributive uses of adjectives, by considering internal phrase complexity, and by splitting fiction into two registers.

4. Contrastive analysis of the lexico-grammar of adjectives

4.1 Attributive vs. predicative function across languages and registers

The first step in the analysis of the sample of 2,000 adjectives from the ENPC is to determine their syntactic function as either attributive or predicative in general fiction overall. This enables a direct comparison between the use of predicative

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[5] ICC-EN and ICC-NO refer to the English and Norwegian parts of the International Comparable Corpus, respectively (Kirk et al. 2018; Čermáková et al. 2021).

adjectives in the material used in Čermáková et al. (Forthcoming) and the current material. It will also, quantitatively, answer the question whether Norwegian fiction seems to use more attributive adjectives than English fiction. An overview of the distribution according to the different adjectival uses described in Section 2.3.1 is given in Figure 4.
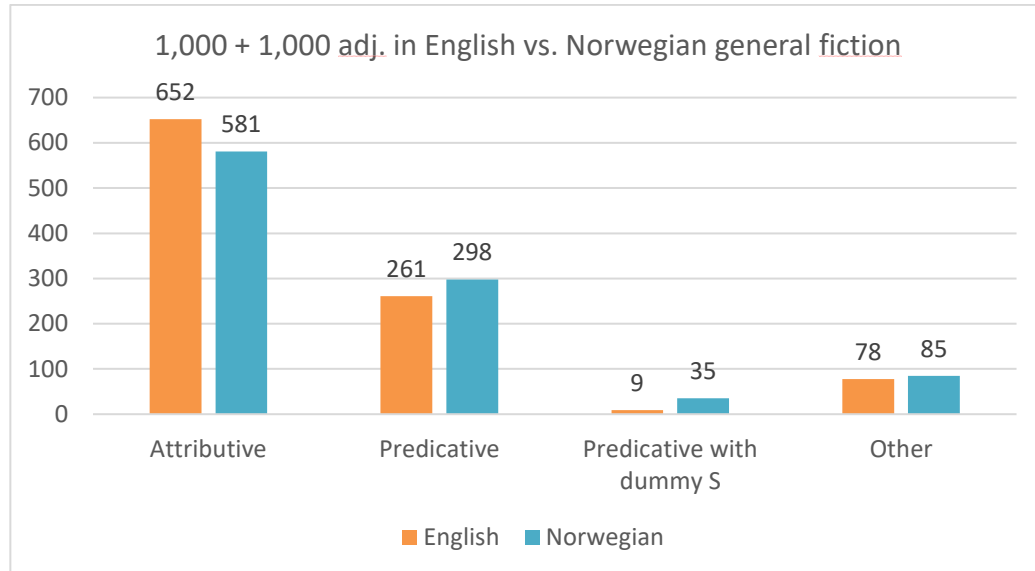

Figure 4. Adjective uses in English and Norwegian general fiction overall (raw numbers)

What is interesting to observe is that Norwegian has more predicative uses (298) than English (261) in fiction overall, i.e. dialogue and narrative combined. Although the difference is not statistically significant,[6] it is the opposite tendency of what was found in the previous study (with 'be' verbs only). What is more, the dummy constructions with ADJ only add to the tendency of predicative use being more prominent in the Norwegian material, and is in line with previous contrastive findings regarding the use of dummy constructions in the two languages; they feature more often in Norwegian than in English (see e.g. Ebeling 2000; Chocholoušová 2007, 2008). Further, the hypothesis that Norwegian may make more use of attributive adjectives to somehow compensate for English predicative use is not substantiated either, as English has significantly more attributive adjectives (652) than Norwegian (581) in the ENPC material.[7] This is in line with Biber et al. (1999: 506), who report that (English) fiction has more attributive than predicative adjectives overall. It is tempting to suggest that there is one cross-linguistic (morphological) reason, in particular, that may account for the more frequent use of attributive adjectives in English, namely compounding. A case in point is the narrowing adjective *double* in *double chin*, which corresponds to the compound noun 'dobbelthake' in Norwegian. However, at a glance, such English adjective + noun combinations that trigger one-word

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[6] $p = 0.07$, but with a relatively wide confidence interval and large effect size, according to a Fisher's Exact Test performed in R v4.1.1 (95 percent confidence interval: 0.6807319 1.0166559; odds ratio: 0.832067), suggesting that the result has to be interpreted with some caution.

[7] $p < 0.05$, but a relatively wide confidence interval and medium effect size, according to a Fisher's Exact Test performed in R v4.1.1 (95 percent confidence interval: 1.122963 1.625863; odds ratio: 1.350936), suggesting that the result has to be interpreted with some caution.

compounds in Norwegian do not seem to be very common in the ENPC material, and it lies outside the scope of the current study to investigate this further.

In the following, we will continue to focus on the attributive and prototypical predicative instances, but now from the perspective of sub-registers in addition to languages. Figure 5 shows the distribution of the 652 (EN) and 581 (NO) attributive adjectives, as well as the 261 (EN) and 298 (NO) predicative adjectives according to sub-register in the two languages.
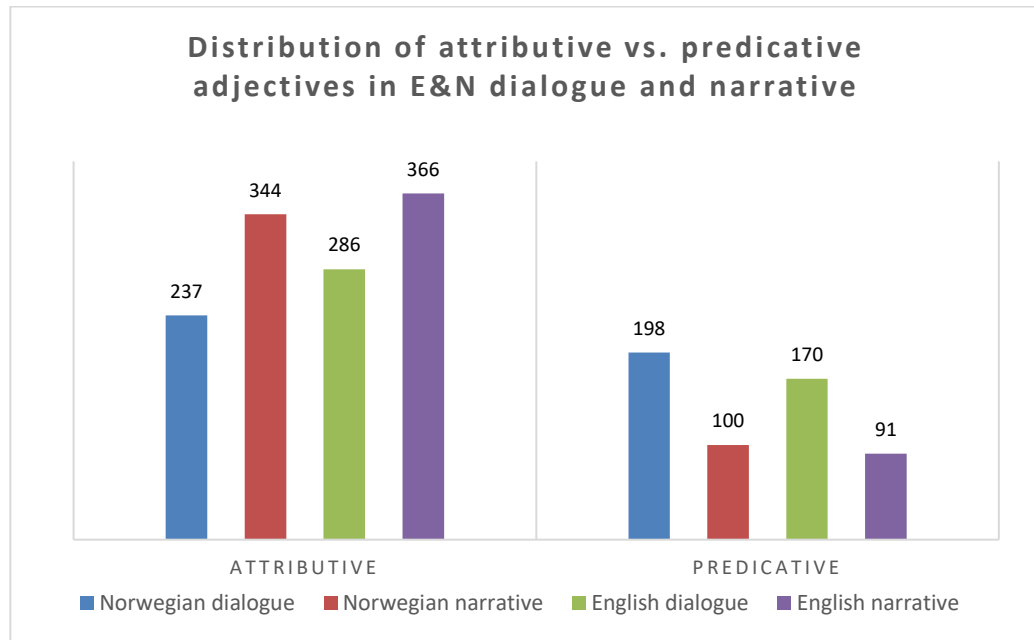

Figure 5. Attributive and predicative adjectives in English and Norwegian dialogue vs. narrative (raw numbers)

We can observe that the attributive use (the four bars to the left in Figure 5) is more frequently attested in both dialogue and narrative in both languages, when compared to the predicative use (the four bars to the right in Figure 5). This is not surprising, given the overall distribution of attributive vs. predicative adjectives in fiction discussed above. Moreover, attributive uses are much more frequent in narrative than in dialogue in both languages. The opposite is the case for the predicative use, where predicative adjectives are more commonly attested in dialogue in both languages. The difference is statistically significant between the registers in both the attributive and predicative uses, but not between the languages within each register, i.e. attributive use in NO dialogue vs. EN dialogue, predicative use in NO narrative vs. EN narrative, etc. (See Tables A and B in the Appendix for p-values, confidence intervals and effect sizes in each case.) This suggests that register has a greater impact than language on the choice of attributive vs. predicative adjective.

Compared to the previous study by Čermáková et al. (Forthcoming), the current Norwegian material boasts a higher frequency of predicative adjectives in both dialogue and narrative. Although not yielding a statistically significant result, the observation deserves a closer look at one potential reason for this mismatch between the studies. While Čermáková et al. only focused on the verbs BE and VÆRE followed by an adjective, this study makes no such restriction on the verb. Thus, a valid question to ask is whether Norwegian makes more use of copular verbs other than VÆRE in the predicative pattern?

4.1.1 *Verbs in the (predicative) NP+V+ADJP pattern*
Table 2 shows that the two 'be' verbs are clearly the preferred choice in this pattern in both languages and in both registers, accounting for between 73% (Norwegian narrative) to almost 90% (English dialogue) of the occurrences. However, other copular verbs are attested, and more commonly so in the narrative sub-corpora than in the dialogue sub-corpora in both English and Norwegian. An example from Norwegian dialogue is given in example (21) and one from English narrative in (22).

Table 2. Copular verbs in the predicative pattern across languages and registers

	English dialogue	English narrative	Norwegian dialogue	Norwegian narrative
BE / VÆRE	152 (89.4%)	68 (74.7%)	158 (79.8%)	73 (73%)
Other verb	18 (10.6%)	23 (25.3%)	40 (20.2%)	27 (27%)
Total	170	91	198	100

(21) *Blir* du sjø-syk?   (EHA1d)
      'become you sea sick'

(22) Everything *looked* strange.   (BO1n)

The most intriguing observation that can be made on the basis of the numbers presented in Table 2 is the striking cross-linguistic difference in the use of verbs other than BE and VÆRE between English and Norwegian dialogue. A copula other than VÆRE occurs twice as often in Norwegian dialogue compared to a copula other than BE in English dialogue, accounting for 20% vs. 10% of the pattern's instances, respectively. Although this may partly explain the conflicting findings from the two studies regarding predicative use in English and Norwegian, the fact remains that predicative use with VÆRE is still more frequently attested in the Norwegian material, although only marginally so in raw numbers (158 in Norwegian dialogue compared to 152 in English dialogue (out of the sample of 500). What the numbers more clearly show, though, is that dialogue and narrative seem to behave slightly differently both language-internally, and also, in the case of dialogue in particular, cross-linguistically.

4.1.2 *The complexity of phrases*
Digging deeper into the structural behaviour of adjectives, this section analyses the grammatical complexity of the Noun phrases with attributive adjectives and the Adjective phrases with predicative adjectives in English and Norwegian dialogue vs. narrative. The comparison between the languages and registers is central to the discussion of which of the two factors seems to play the major role in this regard.

"Traditionally, linguists have operationalized grammatical complexity as the increased use of 'elaborated' structures, consisting of dependent clauses added on to a simple independent clause" (Biber & Gray 2016: 245). However, according to Biber and Gray this represents only one type of grammatical complexity (ibid.), a view also adopted here. This means that also other (embedded) structures are part of the complexity picture. Thus, modification (within a phrase) by words, phrases and clauses are all relevant in the current context.

First, for the purpose of the study of NPs with attributive adjectives, modifiers consisting of single words, phrases or clauses are considered to

contribute to the complexity of a phrase, while determiners are not. Further, although embedded phrases and clauses may arguably result in equally complex phrases to process, the following scale of complexity is adopted: a single word is regarded as the least complex and clauses as the most complex, with phrases in between. The NPs under investigation here have, by default, a premodifying adjective; thus, the least complex type of NP in the current material contains an attributive adjective that may be preceded by a determiner, as illustrated in example (23) with *dead* and *my*, respectively.

(23)   Over <u>my</u> *dead* body.   (ABR1d)

More complex NP types may have a premodifying ADJP, as in (24), a premodifying adjective + a postmodifying PP, as in (25), or premodifying adjective + a postmodifying clause, as in (26). In addition, there is added complexity when any of these are combined, e.g. (27) with a premodifying ADJP and a postmodifying relative clause.

(24)   She found some *really good* ones.   (DL1n)

(25)   … you should have a *real* relationship *with someone.*   (DL2d)

(26)   Først da kunne han vurdere det *berømte* lyset *som dirret over museet* …
                                                               (OEL1n)
       Only then would he be able to appreciate the *famous* light *that shimmered over the museum* …   (OEL1Tn)

(27)   He was the *most private* man *I've ever known.*   (RDA1d)

Table 3 gives an overview of the distribution of the various types of modification in the relevant NPs in the ENPC material.

Table 3. Complexity of NPs with attributive adjectives across languages and registers

Modifiers of head noun	English narrative - attributive	English dialogue - attributive	Norwegian narrative - attributive	Norwegian dialogue - attributive
Premodifying adjective(s) only[8]	254 (69.4%)	211 (73.8%)	240 (69.8%)	183 (77.2%)
Premodifying adjective(s)[8] and postmodification[9]	105 (28.7%)	57 (19.9%)	88 (25.6%)	41 (17.3%)
Premodifying ADJP (i.e. adv+adj(s))	5 (1.4%)	12 (4.2%)	10 (2.9%)	7 (3%)
Premodifying ADJP and postmodification[9]	2 (0.5)	6 (2.1%)	6 (1.7%)	6 (2.5%)
Total	366 (100%)	286 (100%)	344 (100%)	237 (100%)

Table 3 offers quite a clear picture of the relative complexity of noun phrases in the material (see also footnotes 8 and 9). In the majority of cases, in both languages and both registers, the head nouns are only modified by adjectives.

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[8] Including adjectives modifying noun+noun combinations (compounds).

[9] Postmodification in the form of: PP, relative clause, infinitive clause, *-ing* clause (English only), *-ed* clause (English only), postposed adjective. PP is by far the most common type of complementation in both languages and in both registers, accounting for between 55% (Norwegian dialogue) and 62% of the cases (Norwegian narrative). Relative clauses are also fairly common, ranging from around 25% of the cases (English dialogue) to 42% (Norwegian dialogue. The remaining types of complementation patterns are relatively marginal and evenly distributed with between zero and five occurrences each.

Although there are some instances with a sequence of adjectives modifying the same head noun, e.g. example (28), the vast majority are single adjectives, as in (23).

    (28) … mittens on a *lovely nice* day.   (RDO1n)

In other words, the writers tend to use attributive adjectives in relatively simple phrases. What is interesting to note, though, is that this tendency is, perhaps not unexpectedly, stronger in the dialogue sub-corpora than in the narrative ones. Moreover, the difference is greater between the registers within in each language than between the registers across the languages. Similarly, when postmodification is added, the gap is even larger between narrative and dialogue within each language. It is also notable, that the arguably most complex phrases – premodifying ADJP combined with postmodification – are relatively infrequent across the board.

    Admittedly, the phrase complexity discussed above reflects more on the noun than on the adjective within the NPs. Therefore, moving onto the predicative use, the following discussion may contribute more insight into the structural behaviour of adjectives with respect to phrase complexity. Predicative ADJPs revolve around a head adjective and may thus be more likely to reflect features of the adjective proper. The analysis operates along a complexity scale from no modification, e.g. (29), through either premodification only (30), or complementation only (31), to a combination of the latter two (32).

    (29) Alle kunstnere er *fattige*.   (BV1d)
          All artists are *poor*.   (BV1Td)

    (30) … she was <u>raving</u> *mad*.   (ABR1d)

    (31) You're *neurotic* <u>about the business</u>, Arthur.   (RDA1d)

    (32) … den er <u>enda</u> *eldre* <u>enn meg</u>.   (KA1d)
          … it's <u>even</u> *older* <u>than I am</u>.   (KA1Td)

In Table 4, we can observe the distribution of the more or less complex ADJPs in the material.

Table 4. Complexity of predicative ADJPs across languages and registers

Modifiers of head adjective	English narrative - predicative	English dialogue - predicative	Norwegian narrative - predicative	Norwegian dialogue - predicative
No modifier[10]	45 (49.5%)	106 (63.4%)	57 (57%)	103 (52%)
Premodification only (by adverb)	17 (18.7%)	26 (15.3%)	17 (17%)	46 (23.2%)
Complementation only[11]	18 (19.8%)	29 (16.5%)	20 (20%)	26 (13.1%)
Premodification (adv) and complementation[11]	11 (12.1%)	9 (5.3%)	6 (6%)	23 (11.6%)
Total	91	170	100	198

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[10] No modifier, but may include more than one adjective in the phrase.

[11] PP, relative clause, infinitive clause, *that/at*-clause. PP is by far the most common type of complementation in both languages and in both registers, accounting for between 68% (English dialogue) and 85.7% of the cases (Norwegian dialogue). The other types of complementation patterns are relatively marginal and evenly distributed with between zero and four occurrences each, with the exception of *that*-clauses in English dialogue with seven occurrences, thus accounting for around 18% of the cases.

Although the main tendencies regarding the grammatical complexity surrounding predicative adjectives resemble those observed for attributive adjectives, some of the results are less conclusive and therefore harder to interpret. Nevertheless, an unmodified predicative adjective is by far the preferred option overall, ranging from ca. 50% of the cases in English narrative to ca. 63% in English dialogue, with both Norwegian registers well over 50%. In the English material, dialogue shows less complexity than narrative; this is not the case at a general level for Norwegian where no modification is more commonly attested in the narrative sub-corpus. Furthermore, while premodification by adverb is more frequently attested in Norwegian dialogue, complementation is favoured in narrative. Most conspicuous, though, is the more frequent use of the most complex option in Norwegian dialogue, accounting for 11.6% of the cases, compared to 6% in Norwegian narrative. It is hard to determine the reasons for these slightly conflicting results between the registers in Norwegian, and further study, based on a larger sample, needs to be carried out in the future.

General contrastive conclusions to be drawn from this survey of phrase complexity in the ENPC material include the fact that English and Norwegian have similar structural means at their disposal to construct more or less complex NPs and ADJPs, and that fictional texts in both languages have a clear preference for relatively simple phrase structures. However, an important observation in the current context is that register seems to play a more important role than language in the use of complex NPs with attributive adjectives, while there is more variation across the languages with regard to complex ADJPs in the predicative function.

4.2   Semantic class of adjectives according to function

We now turn to the cross-linguistic, cross-register analysis of the semantic class of the attributive and predicative adjectives in the material. A preliminary observation regarding the semantic categories listed in Section 2.3.2 is that three of the categories are hardly attested at all: Ability/willingness, Ease/difficulty and Habitual behaviour. Together with the Miscellaneous category they will be left out of the study.

Before focusing on each of the functions – attributive and predicative – in each of the registers in turn, we will start with some main tendencies. In fiction overall, adjectives in five categories are predominantly used attributively, viz. Colour, Importance, Narrowing, Provenance and Time. This is in broad agreement with Biber et al's (1999: 511) overview of common attribute adjective classes for fiction. Two categories – Affective and Certainty – are mainly used predicatively. Finally, there are two categories that are relatively frequent in both attributive and predicative function, namely Evaluative and Physical property. The following lists serve to illustrate these main tendencies with English examples.

Attributive

– Colour (*black stockings*)

– Importance (*important people*)

– Narrowing (*mere sentimentality*)

- Provenance (*foreign* journal)

- Time (*lifelong* friend)

Predicative

- Affective (*I was furious*)

- Certainty (*That's right*)

Both attributive and predicative

- Evaluative (*beautiful woman*; *it was gloomy*)

- Physical property (*a big chisel*; *you're not ill*)

From a contrastive perspective, it is important to note that these tendencies apply to both English and Norwegian fiction overall, but with some cross-linguistic differences in terms of proportions, as English shows greater preference for attributive Importance and Narrowing and predicative Affective, while Norwegian prefers attributive Colour, Evaluative and Time, as well as predicative Physical property.

4.2.1 *Semantic class of attributive adjectives across languages and registers*
Looking at the tendencies for attributive adjectives in more detail by breaking them down according to language and sub-register, we can observe from Figure 6 that the (proportional) differences between the languages are most conspicuous within one of the registers and not so much across them, i.e. the Norwegian dark-coloured bars rarely align proportionally higher or lower than the English light-coloured bars (see Table C in the Appendix for raw numbers). However, English (light colours) shows a preference for Narrowing while Norwegian (darker colours) shows a preference for Physical property, as noted above.

Notable cross-linguistic differences within one register can be found for adjectives expressing Provenance where there is a marked difference in use between English and Norwegian narrative, but not in dialogue where they are used in a proportionally similar fashion. Further differences between English and Norwegian narrative can be noted for the Narrowing and Physical property categories, and in dialogue for the Importance, Narrowing and Time categories.
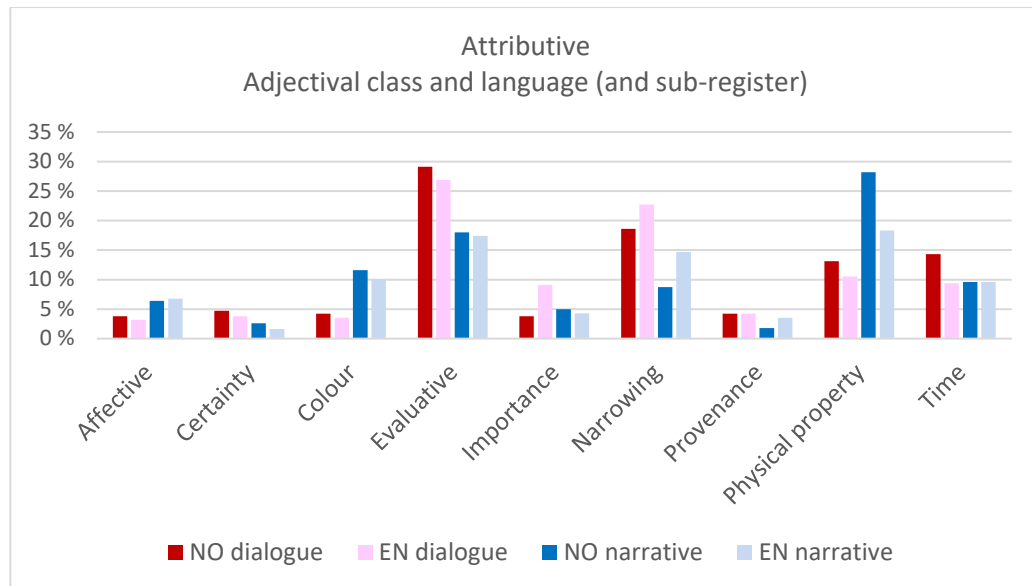
Figure 6. Distribution (%) of class of attributive adjectives according to language (and sub-register)

Regarding cross-register tendencies, Figure 6 shows that three categories are favoured in the narrative parts of the corpus in both languages (the blue bars), namely Affective, Colour and Physical property. There are three categories that are favoured in dialogue (the red-shaded bars): Certainty, Evaluative and Narrowing.

4.2.2 *Semantic class of predicative adjectives across languages and registers*
Moving on to the impact of language on the predicative function, there is one adjectival class in particular where language seems to play a major role: Colour. As shown in Figure 7, colour adjectives do not really feature in either of the English sub-registers, and, as can be seen from Table D in the Appendix, the numbers are generally too low to draw any hard and fast conclusions. Other cross-linguistic differences are, as in the case of attributive adjectives, more confined to one of the registers, where Norwegian makes more use of Affective and Time adjectives in narrative, and English uses more Narrowing and Evaluative ones. In dialogue there is a preference for Evaluative and Narrowing in Norwegian, but for Affective and Importance in English. The tendency for predicative adjectives in the Physical property category is to feature more often in Norwegian in both registers, but there are also clear discrepancies between the registers in both languages.
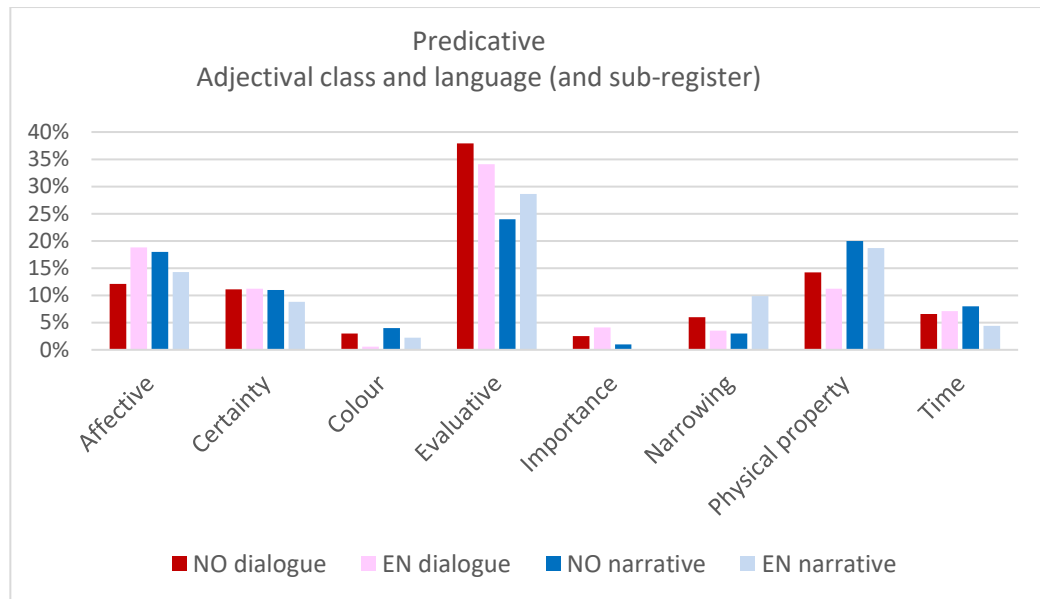
Figure 7. Distribution (%) of class of predicative adjectives according to language (and sub-register)

The main sub-register differences for the predicative function include more use of Evaluative and Importance adjectives in dialogue (red-shaded bars), while narrative (blue bars) is more concerned with Physical property.

5.   Summary and discussion of findings

During the course of the above quantitative and qualitative analyses, a somewhat inconclusive cross-linguistic picture of adjectival behaviour in English and Norwegian fiction has emerged, not least due to the fact that such behaviour also depends on fictional sub-register.

To sum up and discuss the behaviour of adjectives, we will start with some cross-linguistic and cross-register similarities. As we have seen, and not unexpectedly, at a general level, adjectives in the two languages have the same structural and semantic potential.[12] However, in both languages there are proportionally more attributive adjectives in narrative than in dialogue and more predicative adjectives in dialogue than in narrative, which suggests that dialogue puts more weight on adjectival content than narrative does (cf. Pérez Blanco 2016). Regarding the complexity of phrases in which adjectives feature, both languages typically opt for more simple phrases. To the extent that adjectives are used in more complex structures, these are more commonly attested for attributive adjectives in narrative, in both languages. Moreover, preferred correlations between function and semantic class are similar in the two languages.

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[12] But see e.g. Dixon & Aikhenvald (eds) (2004) for cross-linguistic differences in adjective behaviour particularly when non-European languages are part of the cross-linguistic, typological comparison, e.g. "[a]lthough languages allow adjectival modification of nouns in noun phrases, […] there are very substantial cross-linguistic differences in observed patterns of behaviour" (Hajek 2004: 356).

These similarities notwithstanding, some cross-linguistic and/or cross-register differences have also been uncovered. Proportionally more attributive adjectives were attested in English fiction than in Norwegian fiction and more predicative adjectives in Norwegian fiction than in English. With reference to Pérez Blanco (2016) again, this finding suggests that Norwegian puts more focus on adjectival content. Moreover, Norwegian dialogue makes more prominent use of verbs other than VÆRE 'be' in the predicative pattern.

As far as phrase complexity is concerned, register seems to have a greater impact than language, particularly in the NPs with attributive adjectives, as narrative proportionally produced more complex phrases than dialogue in both languages. The tendency in the predicative use was less clear-cut, as English seems to follow the trend of attributive adjectives with a larger portion of complex phrases in narrative than in dialogue, whereas the Norwegian registers do not follow a specific pattern along the complexity scale applied.

Some of the semantic categories of adjectives showed clear preferences in one of the languages compared to the other, regardless of register and to some extent function, notably Colour, Physical property and Time for Norwegian and Importance and Narrowing for English. A slightly larger set of semantic classes of both attributive and predicative adjectives were found to be preferred in one of the registers, regardless of language and to some extent function, viz. Affective, Colour, and Physical property in narrative and Certainty, Evaluative, Importance, and Narrowing in dialogue.

Some of these results substantiate findings from previous studies highlighting linguistic variation across registers (e.g. Biber et al. 1999), notably the hybrid nature of fiction with two sub-registers (Egbert & Mahlberg 2020; Ebeling & Ebeling 2020) and from previous contrastive studies in which Norwegian fiction is found to make more use of temporal expressions than English fiction (cf. Ebeling et al. 2013; Hasselgård 2017): Time adjectives were more prominent in the current Norwegian data.

6. Concluding remarks

Contrary to expectations, the analysis of a sample of (the context of) 2,000 adjectives from the general fiction part of the English-Norwegian Parallel Corpus revealed that Norwegian has more predicative uses than English in fiction overall, i.e. the opposite tendency of what was found in Čermáková et al.'s (Forthcoming) previous study on this pattern (with 'be' verbs only).

The research question implicitly hypothesising that Norwegian may make more use of attributive adjectives to compensate for English predicative use was not substantiated in the current material either. In fact, when looking at the distribution of attributive vs. predicative adjectives separately in dialogue and narrative, it is shown that the attributive use is more frequently attested in both English and Norwegian dialogue and narrative. However, it is much more frequent in narrative than in dialogue in both languages. The opposite is the case for the predicative use, where predicative adjectives are more commonly attested in dialogue in both languages. Notably, the difference is statistically significant between the registers in both the attributive and predicative uses, but not between the languages within each register. Further investigation into the structural properties of adjectives revealed that there were notably more cross-register

differences than cross-linguistic differences in terms of phrase complexity. However, both languages were shown to prefer the simplest phrase options in the majority of cases in both registers.

Addressing the research question of the extent to which language has an impact on the semantic class of attributive and predicative adjectives, we can conclude that English and Norwegian behave similarly at a general level, although there are some proportional differences between the two languages. Again, register seems to play a slightly more important role, given that the tendency is not the same in dialogue and narrative, and the registers differ somewhat in their choice of semantic class.

Finally, the study has demonstrated differences (and similarities) in adjectival behaviour both within and across languages and registers and the results imply that register seems to be a more decisive factor for the lexico-grammatical behaviour of adjectives than language (alone), although both seem to play a role. In the light of the new findings that have been uncovered, further cross-register study of adjectival behaviour is required to determine with more certainty how dialogue and narrative differ at this relatively narrow level of grammatical description. Similarly, further cross-linguistic study of adjectival behaviour is required to determine with more certainty the extent to which English and Norwegian in fact behave differently. To complement such studies a broader scope should be adopted in terms of number of languages and registers studied, as well as number of linguistic features analysed.

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Appendix

Table A. Statistics produced by Fisher's Exact Test in R: attributive vs. predicative use across registers

	Norwegian registers	English registers
Attributive vs. predicative use	p < 0.001 95% CI: 0.2568751 0.4705552 odds ratio: 0.3483882	p < 0.001 95% CI: 0.3066746 0.5691380 odds ratio: 0.4186936

Table B. Statistics produced by Fisher's Exact Test in R: Norwegian vs. English registers according to adjectival function

	Attributive use	Predicative use
NO registers vs. EN registers	p=0.299 95% CI: 0.6983625 1.1129236 odds ratio: 0.8817594	p=0.789 95% CI: 0.7351007 1.5271990 odds ratio: 1.059751

Table C. Distribution (raw numbers and percentages) of class of attributive adjectives according to language (and sub-register) (cf. the bar chart in Figure 6)

Adjectival class	NO dialogue	EN dialogue	NO narrative	EN narrative
Affective	9 (3.8 %)	9 (3.2 %)	22 (6.4 %)	25 (6.8 %)
Certainty	11 (4.7 %)	11 (3.8 %)	9 (2.6 %)	6 (1.6 %)
Colour	10 (4.2 %)	10 (3.5 %)	40 (11.6 %)	37 (10.1 %)
Evaluative	69 (29.1 %)	77 (26.9 %)	62 (18.0 %)	64 (17.4 %)
Importance	9 (3.8 %)	26 (9.1 %)	17 (5.0 %)	16 (4.3 %)
Narrowing	44 (18.6 %)	65 (22.7 %)	30 (8.7 %)	54 (14.7 %)
Provenance	10 (4.2 %)	12 (4.2 %)	6 (1.8 %)	13 (3.5 %)
Phys. property	31 (13.1 %)	30 (10.5 %)	97 (28.2 %)	67 (18.3 %)
Time	34 (14.3 %)	27 (9.4 %)	33 (9.6 %)	34 (9.6 %)
Other	10[13] (4.2%)	19[14] (6.7%)	28[15] (8.1%)	50 (13.7%)
Total	237 (100 %)	286 (100%)	344 (100%)	366 (100%)

Table D. Distribution (raw numbers and percentages) of class of predicative adjectives according to language (and sub-register) (cf. the bar chart in Figure 7)

Adjectival class	NO dialogue	EN dialogue	NO narrative	EN narrative
Affective	24 (12.1 %)	32 (18.8 %)	18 (18.0 %)	13 (14.3 %)
Certainty	22 (11.1 %)	19 (11.2 %)	11 (11.0 %)	8 (8.8 %)
Colour	6 (3.0 %)	1 (0.6 %)	4 (4.0 %)	2 (2.2 %)
Evaluative	75 (37.9 %)	58 (34.1 %)	24 (24.0 %)	26 (28.6 %)
Importance	5 (2.5 %)	7 (4.1 %)	1 (1.0 %)	2 (2.2%)

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[13] Eight instances of Miscellaneous and one each of Difficulty and Habitual behaviour.

[14] 13 instances of Miscellaneous, four of Ability/willingness and one each of Difficulty and Habitual behaviour.

[15] 15 instances of Miscellaneous, five of Ability/willingness, five of Habitual behaviour and three of Difficulty.

Narrowing	12 (6.0 %)	6 (3.5 %)	3 (3.0 %)	9 (9.9 %)
Phys. property	28 (14.2 %)	19 (11.2 %)	20 (20.0 %)	17 (18.7 %)
Time	13 (6.6 %)	12 (7.1 %)	8 (8.0 %)	4 (4.4 %)
Other	13[16] (6.6 %)	16[17] (9.4%)	11[18] (11 %)	10[19] (10.9 %)
Total	198 (100 %)	170 (100 %)	100 (100 %)	91 (100 %)

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[16] Three instances of Miscellaneous, five of Ability/willingness, four of Difficulty and one of Habitual behaviour.

[17] Two instances of Miscellaneous, five of Ability/willingness, eight of Difficulty and one of Habitual behaviour.

[18] Five instances of Miscellaneous, two of Ability/willingness and four of Difficulty.

[19] Three instances of Miscellaneous, four of Ability/willingness and one each of Difficulty, Habitual behaviour and Provenance.